FACT SHEET FOR STATE WASTE DISCHARGE PERMIT ST-7319
JUSTESEN INDUSTRIES, INC.

TABLE OF CONTENTS

INTRODUCTION

This fact sheet is a companion document to the draft State Waste Discharge Permit No. ST-7319. The Department of Ecology (the Department) is proposing to issue this permit, which will allow discharge of wastewater to the City of Blaine POTW. This fact sheet explains the nature of the proposed discharge, the Department's decisions on limiting the pollutants in the wastewater, and the regulatory and technical bases for those decisions.

Washington State law (RCW 90.48.080 and 90.48.160) requires that a permit be issued before discharge of wastewater to waters of the state is allowed. This statute includes commercial or industrial discharges to sewerage systems operated by municipalities or public entities which discharge into public waters of the state. Regulations adopted by the state include procedures for issuing permits and establish requirements which are to be included in the permit (Chapter 173-216 WAC).

This fact sheet and draft permit are available for review by interested persons as described in Appendix A—Public Involvement Information.

The fact sheet and draft permit have been reviewed by the Permittee. Errors and omissions identified in these reviews have been corrected before going to public notice. After the public comment period has closed, the Department will summarize the substantive comments and the response to each comment. The summary and response to comments will become part of the file on the permit and parties submitting comments will receive a copy of the Department's response.

GENERAL INFORMATION	
Applicant	Justesen Industries, Inc.
Facility Name and Address	Justesen Industries, Inc. 1090 Yew Avenue Blaine, WA 98230
Type of Facility	Metal Finishing associated with manufacture of fireplace screens
Facility Discharge Location	Latitude: 48° 59' 59" N Longitude: 120° 40' 00" W
Treatment Plant Receiving Discharge	City of Blaine POTW (WA-002264-1)
Contact at Facility	Name: Wolfgang Kommer Telephone #: (360) 592-2343
Responsible Official	Name: Wolfgang Kommer Title: Vice President Address: Justesen Industries, Inc. 1090 Yew Avenue Blaine, WA 98230 Telephone #: (360) 592-2343

BACKGROUND INFORMATION

DESCRIPTION OF THE FACILITY

Justesen Industries is a major manufacturer of fireplace screens. The Blaine facility is also engaged in manufacture of screens for such specialty uses as aviaries. Approximately 6000 fireplace screens are produced per day.

The production process involves drawing large rolls of 13-gauge wire into 19-gauge wire, coiling the wire, and joining them into screens. This process is followed by cutting, trimming, phosphate coating, and painting.

A water soluble oil is used to lubricate the machines. This oil is not discharged to the sanitary sewer. When it is necessary to dispose of the oil, the volume of the oil is reduced by means of evaporation of the water fraction at a site located adjacent to the building. Sludge, which is periodically recovered from the settling tanks located at the back of the building, is dried using the same evaporation system. The resulting sludge is disposed of as solid waste.

The only significant source of industrial wastewater at the site is associated with the phosphate process. Screens are placed on a trolley and run through the following steps in the spray phosphate process:

1) Screens are cleaned with Oakite 5504 alkaline cleaner.
2) Screens are rinsed using a running rinse.
3) Screens are subjected to a phosphate coating solution consisting of Oakite 647.
4) Screens are rinsed using a running rinse.

The running rinses from the phosphate process drain to a sump behind the building. A pump in the sump pumps the phosphate rinsewater into a three compartment baffled steel settling tank. No pretreatment to remove pollutants is employed other than the settling which occurs in the baffled tank. No polymers, alum, or pH adjustment are employed for pretreatment. Monitoring of effluent (both self-monitoring and surveillance monitoring) indicates consistent compliance with both metals and pH limitations. The zinc compliance problems, which occurred in the early 1990's, have not been a problem in the last several years. Copper is the main metal, which is identified in effluent at environmentally significant concentrations. Copper values are typically in the range of 0.15 to 0.5 mg/L, which is well within the limitations established under the categorical regulations to which this plant is subject. However, higher copper concentrations have occasionally been measured. For example, a daily maximum copper concentration of 2.35 mg/L was measured in July 1999.

PERMIT STATUS

The previous permit for this facility was issued on June 8, 1995, with an expiration date of June 8, 2000. The application for permit renewal was received by the Department on April 12, 2000. A Notice of Temporary State Waste Discharge Permit was issued by the Department on June 12, 2000, with an effective date of June 12, 2000.

SUMMARY OF COMPLIANCE WITH THE PREVIOUS PERMIT

The facility last received an inspection on June 15, 2000. At that time the inspector observed discharge of soapy rinse/wash water associated with washing an oversize screen on the pavement outside the shop. The samples collected at the time of the inspection indicated that the Permittee was in compliance with metal and TTO limitations. Exceedances of the zinc limitations resulted in the early 1990's. The source of the zinc was never determined. Nevertheless, the zinc exceedance problem disappeared according to both state monitoring and self-monitoring data. On February 22, 1999, a Notice of Penalty was issued for failure to submit certain Discharge Monitoring Reports for a period of time covering samples collected from July 1996 through September 1997. A Notice of Correction was issued on December 28, 1999, for failure to report flows on Discharge Monitoring Reports for July and August 1999.

SEPA COMPLIANCE

This plant is preexisting, and no new construction is proposed. Therefore, the applicant is not required to submit an environmental checklist for the re-issuance of this permit.

PROPOSED PERMIT LIMITATIONS

State regulations require that limitations set forth in a waste discharge permit must be based on the technology available to treat the pollutants (technology-based) or be based on the effects of the pollutants to the POTW (local limits). Wastewater must be treated using all known, available, and reasonable treatment (AKART) and not interfere with the operation of the POTW.

Compliance with AKART requirements will be fulfilled by the inclusion of categorical limitations appearing in 40 CFR, Part 413, Subpart E (Electroplating-Coatings Subpart) in this permit. The Department considers the federal categorical limitations to be consistent with AKART-based limitations.

The more stringent of the local limits-based or technology-based limits are applied to each of the parameters of concern. Each of these types of limits is described in more detail below.

TECHNOLOGY-BASED EFFLUENT LIMITATIONS

All waste discharge permits issued by the Department must specify conditions requiring available and reasonable methods of prevention, control, and treatment of discharges to waters of the state (WAC 173-216-110). Existing federal categorical limitations for this facility are found under 40 CFR, Part 413.54, Subpart E (Pretreatment Standards for Existing Sources for Facilities Discharging less than 38,000 liters per day).

The four-day maximum limitations appearing in the 40 CFR, Part 413, Subpart E were converted to thirty (30) day maximum limitations using the conversion table in 40 CFR, Part 413.04. The thirty (30) day maximum limitations were used in the permit.

Pollutant concentrations in the proposed discharge with technology-based controls in place are not expected to cause problems at the receiving POTW such as interference, pass-through, or hazardous exposure to POTW workers nor are they expected to result in unacceptable pollutant concentrations in the POTW's sludge.

In the case of cadmium, there was no 40 CFR, Part 413 standard. Nevertheless, due to the critical role cadmium plays in sludge quality, the Department determined that a cadmium limitation should be placed in this permit. Therefore, the calculated local limitation for cadmium was used as the limitation for the proposed permit.

In the case of lead, the categorical limitation was the limiting factor for the daily maximum limitation (0.4 mg/L), whereas the local limitation was the limiting factor for the monthly average.

In the case of cyanide, no local limit calculation was made, and the categorical limitations were used for both the daily maximum and monthly average limitations.

The categorical limitation was the basis for the TTO limitation appearing in the proposed permit. The lack of a TTO limitation in the existing permit appears to have been based on the interpretation that the certification statement option for TTO's substituted for both monitoring and the limitation. It is the Department's present interpretation that the certification statement option allows for elimination of the monitoring, but not the elimination of the permit limitation.

Due to the lack of categorical pH standards in 40CFR, Part 413.53, pH limitations in this permit are based on Best Professional Judgement. The upper pH limitation of 10.0 was adapted from the optional control program section of Subpart E. The lower pH limitation was adopted as a compromise between the lower state limitation of 5.0 and the optional control program section of Subpart E, which specifies a lower limitation of 7.5.

EFFLUENT LIMITATIONS BASED ON LOCAL LIMITS

A calculation of limitations based on past performance was performed at the time the permit was issued in 1995. The most stringent of calculated limitations and 40 CFR, Part 413, limitations was used to determine the permit limitations.

In the case of cadmium, there was no standard 40 CFR, Part 413, standard. Nevertheless, due to the critical role cadmium plays in sludge quality, the Department determined that a cadmium limitation should be placed in this permit. Therefore, the performance-based limitation for cadmium was used as the limitation in the proposed permit.

Although a copper limitation does not appear in 40 CFR, Part 413, Subpart E, the Department determined that, based on the significant concentrations of copper in the Permittee's effluent, there was a potential that the calculated local limit be exceeded. Therefore, a performance-based copper limitation was used for both the monthly average and daily maximum permit limitations.

The lead limitations are based on the categorical limitations in 40 CFR, Part 413.54.

In the case of zinc, there were no applicable limitations appearing in 40 CFR, Part 413, Subpart E. The Department determined that a zinc limitation should be included in the permit due to past significant concentrations of this metal. Therefore, a limitation is established for the zinc in the proposed permit based on the 1995 performance-based calculations.

The categorical limitation was the basis for the TTO limitation appearing in the proposed permit. The lack of a TTO limitation in the existing permit appears to have been based on the interpretation that the certification statement option for TTO's substituted for both monitoring and the limitation. It is the Department's present interpretation that the certification statement option allows for elimination of the monitoring, but not the elimination of the permit limitation.

COMPARISON OF LIMITS IN PROPOSED PERMIT TO LIMITS IN EXISTING PERMIT

Pollutant Parameter	Daily Max, Existing Permit	Monthly Avg, Existing Permit	Daily Max, Proposed Permit Final	Monthly Avg, Proposed Permit Final
Flow, gpd	7000	1500	7000	N/A
Cyanide, mg/L	0.1	0.1	0.1	0.1
Copper, mg/L	4.1	2.1	4.1	2.1
Lead, mg/L	0.6	0.3	0.6	0.3
Zinc,mg/L	3.4	2.6	3.4	2.6
Cadmium, mg/L	0.3	0.3	0.3	0.3
TTO, mg/L	No Limit	No limit	4.57	No Limit
pH, std units	Not outside the range of 6.0 to 10.0		Not outside the range of 5.5 to 10.0	

MONITORING REQUIREMENTS

Monitoring, recording, and reporting are specified to verify that the treatment process is functioning correctly, and that effluent limitations are being achieved (WAC 173-216-110).

The monitoring schedule is detailed in the proposed permit under Conditions S1 and S2. Specified monitoring frequencies take into account the quantity and variability of the discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring. Monitoring frequency and sample types for each parameter are shown in the table below.

Copper and zinc are required to be monitored on a once per month basis because past data indicates that effluent values for these parameters have a potential to exceed the limitation in the proposed permit.

The monitoring schedule for cyanide and the remaining parameters is two times per year due to the fact that, despite the low potential for the effluent to exceed the proposed standards, USEPA interprets the categorical regulations as requiring a minimum of two samples per year for each categorically regulated parameter.

In the case of TTO monitoring, the Permittee is authorized to submit a TTO certification statement on a quarterly basis in lieu of monitoring for TTO's.

Pollutant Parameter	Sampling Frequency	Sample Type
Flow (process), gpd	Daily	Metered
Cyanide(T), mg/L	Once each six months	Grab
Copper(T), mg/L	Monthly	Composite
Zinc(T), mg/L	Monthly	Composite
Lead(T), mg/L	Once each six months	Composite
Cadmium(T), mg/L	Once each six months	Composite
TTO, mg/L	N/A	Grab
pH, std units	Daily	Grab

OTHER PERMIT CONDITIONS

REPORTING AND RECORDKEEPING

The conditions of S3 are based on the authority to specify any appropriate reporting and recordkeeping requirements to prevent and control waste discharges [WAC 273-216-110 and 40 CFR 403.12 (e),(g), and (h)].

OPERATIONS AND MAINTENANCE

The proposed permit contains condition S5 as authorized under Chapter 173-240-150 WAC and Chapter 173-216-110 WAC. It is included to ensure proper operation and regular maintenance of equipment, and to ensure that adequate safeguards are taken so that constructed facilities are used to their optimum potential in terms of pollutant capture and treatment.

PROHIBITED DISCHARGES

Certain pollutants are prohibited from being discharged to the POTW. These include substances which cause pass-through or interference, pollutants which may cause damage to the POTW or harm to the POTW workers (Chapter 173-216 WAC), and the discharge of designated dangerous wastes not authorized by this permit (Chapter 173-303 WAC).

DILUTION PROHIBITED

The Permittee is prohibited from diluting its effluent as a partial or complete substitute for adequate treatment to achieve compliance with permit limitations.

SOLID WASTE PLAN

The Department has determined that the Permittee has a potential to cause pollution of the waters of the state from leachate of solid waste. This proposed permit requires, under authority of RCW 90.48.080, that the Permittee maintain a current solid waste plan to prevent solid waste from causing pollution of waters of the state.

SPILL PLAN

The Department has determined that the Permittee stores a quantity of chemicals that have the potential to cause water pollution if accidentally released. The Department has the authority to require the Permittee to develop best management plans to prevent this accidental release under section 402(a)(1) of the Federal Water Pollution Control Act (FWPCA) and RCW 90.48.080. The proposed permit requires the Permittee to maintain a plan for preventing the accidental release of pollutants to state waters and for minimizing damages if such a spill occurs. The proposed permit requires the Permittee to update this plan as necessary and submit it to the Department.

SLUG DISCHARGE CONTROL PLAN

The Department has determined that the Permittee has the potential for a batch discharge or a spill that could adversely effect the POTW. Therefore, the proposed permit contains a requirement for the Permittee to submit a Slug Discharge Control Plan to the Department [40 CFR 403.8 (f)]. The permit also contains the requirement that the Permittee periodically evaluate the adequacy of its slug plan. The proposed permit requires that the Permittee submit any such update to the Department within thirty (30) days of their adoption.

GENERAL CONDITIONS

General Conditions are based directly on state laws and regulations and have been standardized for all industrial waste discharge to POTW permits issued by the Department.

Condition G1 requires responsible officials or their designated representatives to sign submittals to the Department. Condition G2 requires the Permittee to allow the Department to access the treatment system, production facility, and records related to the permit. Condition G3 specifies conditions for modifying, suspending, or terminating the permit. Condition G4 requires the Permittee to apply to the Department prior to increasing or varying the discharge from the levels stated in the permit application. Condition G5 requires the Permittee to construct, modify, and operate the permitted facility in accordance with approved engineering documents. Condition G6 prohibits the Permittee from using the permit as a basis for violating any laws, statutes, or regulations. Conditions G7 and G8 relate to permit renewal and transfer. Condition G9 requires the Permittee to control production or wastewater discharge in order to maintain compliance with the permit. Condition G10 prohibits the reintroduction of removed pollutants into the effluent stream for discharge. Condition G11 requires the payment of permit fees. Condition G12 describes the penalties for violating permit conditions.

PUBLIC NOTIFICATION OF NONCOMPLIANCE

A list of all industrial users which were in significant noncompliance with Pretreatment Standards or Requirements during any of the previous four quarters may be annually published by the Department in a local newspaper. Accordingly, the Permittee is apprised that noncompliance with this permit may result in publication of the noncompliance.

RECOMMENDATION FOR PERMIT ISSUANCE

This proposed permit meets all statutory requirements for authorizing a wastewater discharge, including those limitations and conditions believed necessary to control toxic materials. The Department proposes that the permit be issued for such a period as to expire June 30, 2005. This expiration date will result in permit expiration consistent with the planning cycle for the Nooksack Basin. Permits are scheduled to be issued in the Nooksack Basin during state fiscal year 2005, which begins July 1, 2004, and ends June 30, 2005.

APPENDIX

APPENDIX A —GLOSSARY

Average Monthly Discharge Limitation—The average of the measured values obtained over a calendar month's time.

Best Management Practices (BMPs)—Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural, and/or managerial practices to prevent or reduce the pollution of waters of the State. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

Bypass—The intentional diversion of waste streams from any portion of the collection or treatment facility.

Categorical Pretreatment Standards—National pretreatment standards specifying quantities or concentrations of pollutants or pollutant properties which may be discharged to a POTW by existing or new industrial users in specific industrial subcategories.

Compliance Inspection - Without Sampling—A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations.

Compliance Inspection - With Sampling—A site visit to accomplish the purpose of a Compliance Inspection - Without Sampling and as a minimum, sampling and analysis for all parameters with limits in the permit to ascertain compliance with those limits; and, for municipal facilities, sampling of influent to ascertain compliance with the 85 percent removal requirement. Additional sampling may be conducted.

Composite Sample—A mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be "time-composite" (collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increased while maintaining a constant time interval between the aliquots).

Engineering Report—A document, signed by a professional licensed engineer, which thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report shall contain the appropriate information required in WAC 173-240-060 or 173-240-130.

Grab Sample—A single sample or measurement taken at a specific time or over as short period of time as is feasible.

Industrial User—A discharger of wastewater to the sanitary sewer which is not sanitary wastewater or is not equivalent to sanitary wastewater in character.

Industrial Wastewater—Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business, from the development of any natural resource, or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated storm water and, also, leachate from solid waste facilities.

Interference—A discharge which, alone or in conjunction with a discharge or discharges from other sources, both:

Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and

Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) [including title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to subtitle D of the SWDA], sludge regulations appearing in 40 CFR, Part 507, the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research, and Sanctuaries Act.

Local Limits—Specific prohibitions or limits on pollutants or pollutant parameters developed by a POTW.

Maximum Daily Discharge Limitation—The highest allowable daily discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. The daily discharge is calculated as the average measurement of the pollutant over the day.

Method Detection Level (MDL)—The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is above zero and is determined from analysis of a sample in a given matrix containing the analyte.

Pass-through—A discharge which exits the POTW into waters of the-State in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation), or which is a cause of a violation of State water quality standards.

pH—The pH of a liquid measures its acidity or alkalinity. A pH of 7 is defined as neutral, and large variations above or below this value are considered harmful to most aquatic life.

Quantitation Level (QL)—A calculated value five times the MDL (method detection level).

Significant Industrial User (SIU)—

1) All industrial users subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR Chapter I, Subchapter N; and

2) Any other industrial user that: discharges an average of 25,000 gallons per day or more of process wastewater to the POTW (excluding sanitary, non-contact cooling, and boiler blow-down wastewater); contributes a process wastestream that makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or is designated as such by the Control Authority* on the basis that the industrial user has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement [in accordance with 40 CFR 403.8(f)(6)].

Upon finding that the industrial user meeting the criteria in paragraph 2, above, has no reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement, the Control Authority* may at any time, on its own initiative or in response to a petition received from an industrial user or POTW, and in accordance with 40 CFR 403.8(f)(6), determine that such industrial user is not a significant industrial user.

*The term "Control Authority" refers to the Washington State Department of Ecology in the case of non-delegated POTWs or to the POTW in the case of delegated POTWs.

Slug Discharge—Any discharge of a non-routine, episodic nature, including but not limited to an accidental spill or a non-customary batch discharge to the POTW. This may include any pollutant released at a flow rate which may cause interference with the POTW.

State Waters—Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington.

Stormwater—That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a storm water drainage system into a defined surface water body, or a constructed infiltration facility.

Technology-based Effluent Limit—A permit limit that is based on the ability of a treatment method to reduce the pollutant.

Total Dissolved Solids—That portion of total solids in water or wastewater that passes through a specific filter.

Total Suspended Solids (TSS)—Total suspended solids is the particulate material in an effluent. Large quantities of TSS discharged to a-receiving water may result in solids accumulation. Apart from any toxic effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.